An Online Course on Human Performance Modeling

Final Report
Project N00014-05-1-0387

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University of Michigan

Report No. FR-05/ONR-1

Period Covered: 1 December 2004 - 1 August 2005

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 074-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	11 January 2006	Final Report 1 December 2004 – 1 August 2005

4. TITLE AND SUBTITLE
An Online Course on Human Performance Modeling

5. FUNDING NUMBERS
N00014-05-1-0387

05PR06731

6. AUTHOR(S)
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
University of Michigan Division of Research Development and Administration, Ann Arbor, MI 48109

8. PERFORMING ORGANIZATION REPORT NUMBER
FR-05/ONR-1

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Office of Naval Research (Code 342)
875 N. Randolph St.
Arlington, VA 22217-5660

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for Public Release; Distribution Unlimited

12b. DISTRIBUTION CODE

13. ABSTRACT ***(Maximum 200 Words)***

This is the final report for a project whose function was to present an online course on the current state of the art in cognitive modeling for user interface design. Information is presented on the course organization, mechanisms of presentation, and feedback from attendees. The slides and audio recordings of the course are available on the web at http://www.cs.cmu.edu/~bej/CognitiveModelingForUIDesign/

14. SUBJECT TERMS
User Interface Design, Human Performance Modeling

15. NUMBER OF PAGES
50

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UL

Final Report

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David Kieras, Principal Investigator

Introduction

This project was a mechanism for presenting an Online Seminar on Cognitive Modeling for User Interface Design. Two experts in this field, David Kieras, at the University of Michigan, and Bonnie John, at Carnegie-Mellon University, prepared slides which seminar attendees downloaded in advance from a web site, and which were then presented as a seminar online over three days by telephone conference call and streaming audio over the web, and questions collected during and after the presentations by telephone and real-time email and chat, which were then answered by both experts. A large number of people attended the seminar and provided by feedback. The complete materials for the Online Seminar are now archived and accessible on the web at http://www.cs.cmu.edu/~bej/CognitiveModelingForUIDesign/

The basic rationale for the seminar is that the two experts had both been sponsored in their past and current work by ONR which had resulted in amassing considerable expertise about this increasing important topic, and so this knowledge should be disseminated more widely. Thus, the two presenters contributed their time and effort at no cost. The funding in this project was to cover all of the expenses of presentation, but most importantly, to gain access to the consulting services for planning, publicity, presentation revision, coaching, arranging web and telephone resources, and on-line moderation and management during the course itself by an expert in online teaching and learning, Dr. Lisa Neal.

Thus the PI and the University of Michigan simply administered the funding for this project (at a greatly reduced indirect cost rate), and Dr. Neal did the substantive work. Dr. Neal brought the project in well under budget (the remaining funds were returned to ONR). Dr. Neal also prepared a detailed and complete final report for the PI, containing information about the attendance and the lessons learned. Because of its value in future such activities, rather than excerpt or paraphrase Dr. Neal's excellent report, it is simply included in the following pages.

Final Report
Seminar on Cognitive Modeling for User Interface Design

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1. Project overview

The project was to deliver a free online seminar taught by Professor David Kieras and Professor Bonnie John on Cognitive Modeling for User Interface Design. We decided in advance the best structure was to offer it for 3 consecutive days, February 28, March 1, and March 2, 2005, for 2.5 hours each day. We decided to use a low-tech approach of audioconferencing by phone and slides that participants follow on their own to meet the needs of people at military sites where software can not be installed by individuals. We also decided that it would consist primarily of lecture although we wanted some interactivity through questions from participants. We capped enrollment at 200. We decided that we would archive the seminar to allow for replay by anyone who missed all or part. Finally, we decided to get feedback from participants through a survey.

2. Project deliverables and analysis

2.1 Seminar topic

Clearly, from the number of people signing up and attending the seminar, there was great interest in the topic and in learning about this topic from these well-known and well-respected presenters. There is also interest in having more seminars in the future. With conference travel harder to get funded, and tutorials so expensive at many conferences, there is an educational need that this seminar clearly filled.

2.2 Seminar style

For this type and amount of material, a seminar that was primarily lecture was effective, especially since there were opportunities for asking questions and additional resources were provided. For the number of people attending, it was highly interactive and effective and both presenters were clear and articulate. Prof. Kieras and I had discussed how to present effectively online before the seminar. While it wasn't planned this way, having Prof. John available to answer questions in the chat and by phone at the end of a unit during Prof. Kieras' sessions, and having Prof. Kieras do the same during Prof. John's session, worked very well and made the sessions more interactive, more interesting, and even gave people a bit of variety in the voices they were listening to.

I acted as moderator during the sessions, starting and ending each session, introducing speakers, thanking the sponsor, and moderating the Q&A segments. I also offered support to participants, and found that the volume of email was quite high, and this was time-consuming since I tried to answer every question (see comment in section 2.4 below about need for a FAQ to reduce questions). The only time this proved especially burdensome was when people were calling me or emailing me right at the start of a session, and I couldn't multitask sufficiently to meet everyone's needs instantly.

2.3 Seminar duration and schedule

The timing of each day worked very well, with a 2.5 hour session covering 2 topics per session, each topic followed by Q&A, and a 5 minute break in between. The seminar ended on time each day, only going over a few minutes on the last day to try to get all questions answered. I don't believe another structure of condensing it into fewer days or using shorter durations for more days would have worked as well; certainly it is hard to imagine offering the seminar in one day with more breaks. Since attendance fluctuated some, and it may have been hard for people to commit time over three days, having a shorter period each day for more days may have led to fewer people attending.

The time of day, starting at 1 p.m. EST, worked well for all US time zones, and for people in Europe. There were many interested people from Asia/Pacific who probably used the archive instead of connecting live.

2.4 Seminar announcement, registration, web sites, and attendance

With Prof. Kieras and Prof. John's help, I prepared a seminar announcement (see Appendix A) that was distributed to military people first and then, a week later, to the CHI announcements listserv and the CTA Resource and Cognitive Science Society mailing lists. The announcement was designed to provide all the information a potential participant needed to know about what the seminar covered, how it was being offered, who was offering it, and what it cost in a length that could be distributed by email.

Because I wanted to have a site up when announcements went out so that people could register, I decided to do what was quickest, using an existing service with a template to configure a site. I chose this instead of having a designer build a site for us, as specified in the proposal, because that would have delayed getting the announcements out, and we needed to give people time to arrange their work schedules to fit the seminar in.

In choosing between a number of options, I decided the Yahoo Groups site had many advantages, including that it someone had to register to receive messages and access materials; that it allowed me to send out messages to everyone who was registered; that it had a repository for shared documents; and that it had a chat tool that would work on military configurations. I had also used it for previously and knew how to configure it quickly and easily. The site is located at http://groups.yahoo.com/group/CognitiveModeling/.

Yahoo Groups had some limitations that I discovered during the registration process and during the seminar. One limitation was that some people had Yahoo blocked at work, so that they had to access it from a home computer to register for the seminar or access materials. Another limitation was that the site only allowed a certain (unspecified) number of people to download materials daily. The final limitation was the storage size; while all of Prof. Kieras' presentation materials and the various seminar announcements could be posted, Prof. John's slides and the archive of the audio from each day were too big. I discovered the limitation about restricting the number of people who could download once Prof. Kieras' materials were posted and we reached that limit. One of the people who had registered for the seminar, Dan Zlotnikov at the University of Waterloo, offered to set up a mirror site with the presentation materials. When it turned out that the audio archive was too large to post at the Yahoo site, Dan also posted them on his site at the end of each day.

Following the seminar, Prof. John set up a permanent archive site with my assistance (writing the text and organizing the materials by session). While the Yahoo Groups site is still there, the site, at http://www-2.cs.cmu.edu/~bej/CognitiveModelingForUIDesign/index.htm, provides all the presentation materials and audio archive. Unfortunately, I did not think about including a counter on the archive site until after it was announced, so we do not know how many people have used it.

In terms of numbers, 292 people registered at the Yahoo Groups site and over 300 contacted me about the seminar, either to register or ask for further information. (One lesson learned in this process is that no matter how clearly something is stated, at least one person will not understand and will ask about it. I spent a lot of time answering emails with specific questions about different aspects of the seminar.) The number of people who came to the seminar peaked at 225 on the first day. The second day attendance peaked at 175, and 120 on the third day. This drop-off was not surprising given the number of hours needed to take the entire seminar and also the availability of the archive. Also, note that some of these "connections" were groups of people attending together (see question 18 in the survey, Appendix B, for further information). Overall, this was an excellent response for an online seminar, and exceeded my expectations.

While the choice of the Yahoo Groups site was expedient and provided the text chat during the seminar, setting up a site from the start without the limitations of Yahoo Groups would have worked better, especially that only a certain number of people could download files every day and that the audio archive files were too large to post there. It is unfortunate these limitations were not documented. It still would have been necessary to have a mirror site since too many people trying to download files at once caused problems with the other sites as well. Ideally, the site for course registration should have been the same as the permanent archive site. The other thing I would do differently is create a page of frequently asked questions (FAQ) because, at some point, I received a question about every aspect of the seminar, including "How much does it cost?", "Can I register for only one day?", and "Is each day a repeat of the previous day?" Overall, the Yahoo Groups site worked well and can be kept up indefinitely, as can the final archive site.

2.5 Seminar delivery

2.5.1 Audioconferencing

The original plan was to provide audioconferencing by phone and a site for downloading presentation materials. Because the number of people who would register (or who would actually attend) was unknown and because we were focused on the military, we did not consider options like streaming audio until part way through the registration

process. For the phone services, I wanted one that provided high quality audio; put people on automatic mute, necessary to avoid background noise; allowed at least 3 people (Prof. Kieras, Prof. John, and me) to be on the open line, was operator-assisted so we could have Q&A, and produced an archive.

I researched audioconferencing services and they varied considerably in price. Phone services become more expensive the more services you add, and, for some companies, there was a large per minute increase when an operator was added to a call. The phone service I selected, Link Conference Call, was recommended to me, providing an assurance of high quality audio, and offered operator-assisted toll-free calls at .12 per person per minute. Other companies provided the same service for as much as .36 per person per minute. Link Conference Call was willing to charge for actual use instead of estimated use. Since more people always sign up for free seminars than actually attend, especially when an archive is available, I wanted to avoid having to estimate how many of the registered people would really attend and either pay for people who weren't there or have people unable to get into the call. Also, it didn't seem that we would know until the last minute how much interest there was and we needed an option that would work for a small to large (initially capped at 200) group.

The service was configured exactly as we anticipated would work best for this type of seminar: a person calling in was placed on automatic mute and we had an operator available who could open the line for questions when we requested it. The operator we had, Marie, used AOL instant messenger (AIM), and she and I were able to IM during the sessions, which proved helpful since I could tell her when we were about to open the line for questions and she could tell me how many people were connected by phone or streaming audio and how many people were in the queue during Q&A sessions. But more important than the charges and services, was that the audio quality was excellent throughout the 3 days.

2.5.2 Streaming audio

For people outside of the US and Canada, we had a non-toll-free number they could use to join the seminar. However, when a large number of people outside of the US and Canada expressed interest in the seminar, we considered adding a streaming audio option since otherwise the phone charges would be high for people dialing in. We realized that people using streaming audio would have the disadvantage of not being able to ask questions verbally, however they would have other options for asking questions.

The streaming audio option, given to participants as a url, proved to be more popular than the phone option. For people in the US and Canada, this was in part because far more people have a headset for their computer than for their phone, making listening easier and less disruptive to people around them; also, it didn't tie up a phone line for so long. Once we saw how high the level of interest was in the seminar, and decided that perhaps we shouldn't cap it at 200, as previously planned, we realized that if everyone who expressed interest attended, we would go over budget. Adding the streaming audio option was financially advantageous for us since streaming audio was offered at a flat rate. When I inquired about the streaming audio option, it was originally quoted at $450 per session. The manager then contacted me the next day to say that he had forgotten it was a 2.5 hour call and the rate would actually be $650. Since I had already gotten Dr. Chipman's ok on adding this option and incurring the expense, I suggested we compromise on $550 per session, which the manager agreed to.

While there were some minor problems with streaming audio, there were few complaints. Interestingly, participants are more tolerant of problems with streaming audio than with the phone, probably because people don't expect the perfect quality we are accustomed to on the phone (other than cell phones). There were 3 problems that occurred with the streaming audio: on the first day there were some points when the audio quality was poor; on the second day the person running the streaming audio for us didn't realize we were taking a break and ended the session, but realized his mistake and reopened it. This required people to reconnect once they realized the session had started up again but they weren't hearing it; and on the last day the url they sent me that I distributed to everyone had a "-" where it needed a "=". Link Conference was apologetic about all 3 issues, especially the second one, and they reduced our fee for that day. The only other point about the streaming audio is that their web site should have specified that someone needed Windows Media Player and where to download it from (especially for Mac users, who may not have it already).

While overall the combination of phone and streaming audio worked well, the only thing I would have done differently is figured out a tactful way to promote the streaming audio option over the phone, for those who could use it, to reduce cost. I also would have provided information about headsets for streaming audio users.

2.5.2 Q&A

We provided a few ways that people could ask questions. The first one was over the phone at the end of each unit, and for that we needed an operator assisted call. That worked well, especially since the person asking the question could seek clarification or follow up immediately after the answer. It had the added benefit of varying the voices people were listening to.

The second way of asking questions was through email to me. That also worked well, and meant that any unanswered questions could easily be forwarded to Prof. Kieras to answer following the session (this only happened one day).

The third way was through text chat, which was included in the Yahoo Group I set up for seminar participants. The chat proved to be very successful in many respects, particularly that Prof. John was in the chat while Prof. Kieras was speaking (and Prof. Kieras while Prof. John was speaking) answering questions and providing references throughout the seminar, not just during the Q&A at the end of a unit. Some participants answered questions for each other as well. The chat also made the seminar seem much more interactive, and provided more of a sense of awareness of others through the participant list on the side. The chat tool was selected because it did not require any downloads and should work on military configurations, however it had 2 undocumented limitations that impacted its usefulness. The first was that it had a limit of between 40 and 50 participants, so once the limit was reached others couldn't get in. A higher limit or no limit would have been much better. The other limitation was that there was no way to save the text in the chat other than with screen shots. Ideally, I could have forwarded the questions and discussion to the presenters following the session and also archived it.

The Q&A went well and made the seminar more interactive. Offering multiple ways of asking questions worked well too. The only thing I would have done differently was providing a text chat that did not restrict the number of participants, and capturing the questions (and answers) on the web site.

2.5.3 Course materials

I made suggestions to Prof. Kieras about making his presentation materials work better for an online seminar, since they were originally developed for a face-to-face one. The course materials from Prof. Kieras were available in advance on the Yahoo Groups site as pdfs to download and there were no problems reported. Prof. John's materials were very large files, and they caused problems because of the size. We ended up, at the last minute, creating other mirror sites. (As Dr. Chipman commented, redundancy can be beneficial, especially when so many people are accessing large files at once to download.)

The slides worked well, very extremely informative and easy to follow, and the presenters did an excellent job of reminding people which slide they were on. The only problem was due to the size of Prof. John's slides for downloading.

2.6 Survey

I created a survey, reviewed by all, and posted it using SurveyMonkey, an online survey tool. 102 participants filled out the survey, which is a good response rate. Feedback was very positive and is displayed in Appendix B.

2.7 Final recommendations

Overall, this was a great success, with lots of positive feedback and minimal complaints. We came in under budget, despite greater than anticipated interest, due to the use of streaming audio. There were some unplanned aspects that worked wonderfully, such as each presenter helping out in the chat while the other presented, and each helping answer questions at the end of each unit. It was also helpful to be able to instant message (IM) with Prof. John during the sessions.

The only thing that remains to be done is to announce the availability of the archive site, possibly through the same ways the seminar was announced originally, and consider the requests for additional seminars, using the lessons learned above. Thank you for giving me the opportunity to support this seminar. It was a pleasure working with Prof. Kieras and Prof. John and I appreciate all the hard work they put into making this a success.

Appendix A. Seminar announcement

Seminar on Cognitive Modeling for User Interface Design

Seminar description: This seminar presents the current state of the art of evaluating user interface designs using models of human performance that are based on cognitive architectures. Such models can yield usability results without the delay and expense of user testing of prototypes, but because they are new and still under development, whether and how to apply them is a challenge. This seminar will survey current theory and practice; no "how-to" of actual model construction will be presented; rather the goal is to enable a good choice of whether a modeling approach will be useful, and which type of model would be best to pursue.

Topics will include:
- Approaches to model-based evaluation of user interfaces
- An example cognitive architecture
- Survey of cognitive architecture systems
- GOMS models as simplified cognitive architecture models
- Practical issues in human performance modeling
- Some current tools for rapid model construction

Seminar Objectives: In this seminar, you will become familiar with
- The basic approaches to model-based evaluation of user interfaces, and their advantages and disadvantages.
- The important features of cognitive architectures that can be applied to evaluation, and specific properties of important current architectures.
- What type of model is likely to work best in a particular application.
- How to deal with practical issues of model construction, validation, and usage, using some current tools.

Seminar dates: February 28, March 1, and March 2, 2005 from 1 - 3:30 p.m. EST

How this seminar will be offered: This online seminar will be delivered over the phone. Seminar materials will be available online. Each seminar session will provide opportunities for Q&A, and questions can be asked using the phone or email. An archive of each session will be available following the session.

Fees: None

Target audience: This seminar will be of interest to human-computer interaction researchers or designers who want an current overview of the modeling approach, or who are considering applying this approach to future projects. Prior background in psychology or user interface design is desirable; no prior knowledge of programming or modeling is required.

Registration: Email lisa@acm.org to be registered and receive the seminar url.

Instructor:
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David Kieras is a Professor in the Electrical Engineering and Computer Science and Psychology Departments at the University of Michigan. His primary general research field is applied and theoretical cognitive psychology, with specific interests in human-computer interaction, cognitive simulation modeling, human performance, and natural language processing. His research has been supported by ONR, NASA, IBM, and DARPA. He has presented many tutorials and workshops to academic and industrial audiences on human performance modeling and user interface design.

Guest lecturer:
Professor Bonnie John
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Bonnie John is a Professor in the Human-Computer Interaction Institute at Carnegie Mellon University. Her primary research interest is in techniques to improve the design of computer systems with respect to their usefulness and usability. Much of her work focuses on cognitive modeling, where she works within a unified theory of cognition to develop models of human performance that produce quantitative predictions of performance with less effort than prototyping and user testing. Her research has been supported by ONR, NASA, DARPA, NSF, Xerox, GM, and Boeing. She has presented many tutorials and workshops to academic and industrial audiences on human performance modeling, general HCI, and usability and software architecture.

Seminar moderator:
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Sponsorship: This on-line seminar is supported by a grant from the Cognitive Science program of the Office of Naval Research. Basic research on computational modeling of human cognitive architecture has been a major emphasis of ONR's Cognitive Science program. These theories have now reached a sufficient level of maturity that many practical applications in the design of human system interaction, as well as training applications, are now feasible. This seminar is intended to inform participants of these new developments. It is intended, first of all, for personnel in Navy laboratories who are involved in the design of systems that will have human users or operators, and for program managers planning to purchase such systems. For that reason, the seminar is using a rather low tech approach compatible with the restrictions of the Navy Marine Corps IntraNet (NMCI). The capacity of the seminar is large, but limited, so members of the intended audience are urged to register promptly. Registration will be opened to the larger public.

Appendix B. Survey results

Question 1

1. How did you hear about this seminar?			
		Response Percent	Response Total
Cognitive Science Society email announcement		12.9%	13
CTA (Cognitive Task Analysis) email announcement		12.9%	13
CHI email announcement		12.9%	13
Forwarded email announcement		**33.7%**	**34**
Email from Dr. Susan Chipman		1%	1
Individual email or word of mouth		15.8%	16
View Other (please specify)		10.9%	11
	Total Respondents		**101**
	(skipped this question)		1

How did you hear about this seminar?	
1.	email from academin advisor
2.	ACT-R email announcement
3.	mit human factors email
4.	eLearning topic by Ms. Neal
5.	Class Professor Lu
6.	Western New York PDMA
7.	Interaction Designers email list
8.	CHI, forwarded, individual
9.	I was searching for online cog psy courses
10.	Rocky Mtn. CHI email
11.	my advisor Mary Hegarty

Question 2

Why were you interested in taking this seminar?	
1.	I am studying human factors engineering at the University of Virginia.

2.	interest in user experience design
3.	This is my field of study (Human Factors) and thus it is always interesting to broaden one's perspective
4.	I am working with GOMS models for my dissertation, and was interested in upgrading that model to a higher-level architecture - Bonnie John's talk in particular gave me the insight I needed to learn how to do that.
5.	Because I'm working on a investigation group that actually is carrying out a proyect that involve cognitive modelling
6.	I wanted to know more about how we might use cognitive modeling in UI design and what the state of the art is.
7.	Useful to me as both a user interface designer and human factors researcher.
8.	HCI/Cog Engineering researcher and practioner. Want to learn more about other related disciplines.
9.	requested by manager
10.	As I/o Psy intern: get a better understanding of the field
11.	Thopught it might help with current research
12.	My research lies in the field of cognitive modeling in medical informatics
13.	I am an educator in Computer Science.
14.	The content is related with my Ph.D. thesis.
15.	I teach user interface design to third year Computer science students part of a multmedia design course
16.	Research on Cognitive Architectures
17.	interested in this research area
18.	I am working in this area.
19.	because i am doing project in this field.
20.	I'm a human factors graduate student and have interests in cognitive issues involved in video games. So, cognitive architectures seemed like a relevant topic.
21.	To see where things have gone in the last 20 years
22.	subject matter
23.	The topics were interesting and are related to my field.
24.	I am interested in Cognitive modeling in general, and in any tool to make it faster, in specific.
25.	Interested in topic and speakers are well-known experts
26.	I do some interface design and this sounded interesting.
27.	My science work is related with field of this seminar
28.	I am a cognitive psychologist who works as a human factors engineer. I have studied this topic and worked with some of the researchers who were cited. I am interested in using these tools in the future.
29.	I've been substantially involved in cognitive modeling in the past, and I'm currently using EPIC to model a dual task involving auditory information
30.	I'm studying human factors and cognitive science at the University of Toronto, and so this discussion spoke to both of my interests.
31.	I'm a first year PHD student and I'm interested in HCI.

32.	It was free The topic sounded interesting It was a good opportunity to hear what is 'current' and happening in human-factors related research Others were attending and asking questions.
33.	Work on Government Project that uses similar processes.
34.	Wanted to know what has been achieved and where the area of research is going.
35.	Working on a Naval Project on HCI in the UK
36.	Was interested in finding the lastest info on human performance issues.
37.	I am PhD Student on Cognitive Ergonomics.
38.	I teach similar techniques in a graduate HCI class.
39.	I am currently working toward my Ed.D. in Curriculum and Instruction, with a specialty in instructional technology. I am also a senior instructional designer for a government contractor. Cognitive modeling is applicable to both areas of interest.
40.	Learning more about Modeling and diverse HCI techniques
41.	My area of interest and research
42.	I am working in HCI and interested in how to use cognitve modeling to compare the usability of different UI without a user testing.
43.	I am using ACT-R architecture to model Naturalistic Decision Making as a part of my PhD. I was interested in seeing how ACT-R has been applied in other situations and also to learn abit ore about other architectures as my knowledge is pretty domain specific.
44.	I am not trained in human factors but have been supporting a human factors task- I found the information understandable and informative
45.	I was interested in simple user interaction models to help guide interface design.
46.	i wish to apply cognitive science in the design of user interfaces
47.	I am performing some HF related analyses in day to day research, so cognitive models provide added insight.
48.	I teach courses in the HCI area and would like to develop one in Cog. Mod.
49.	I am currently applying NGOMSL in a project I'm doing at SoarTech, and I'm curious about how architectures can be used to improve the validity of the process. I also wanted to ask the question I posed to Bonnie about accounting for errors in your model.
50.	Modeling seems to have great potential
51.	a quick way to get up-to-date on current modeling ideas and issues.
52.	Because I have been reading about the cognitive modeling before during the design and implementation of some UIs.
53.	I teach a course in Human factors engrg and would like to use more quantitative methods
54.	I have done work in the area of cognitive workload modeling.
55.	Interest in HCI.
56.	My background interest and helpful to my teaching and learning.
57.	I was wondering whether cognitive modeling was something that I could use on my job.
58.	To learn up-to-date progress in cognitive modeling for interface evaluations.
59.	always looking for ways to represent human thinking. Thought there would be material for my instructional design class.

60.	To learn a bit more about cognitive modeling and become familiar with the work that ONR is involved with.
61.	thought this seminar might be relevant to research on team cognition
62.	Wanted to learn more about cognitive modeling.
63.	As a cognitive science student with special interests in human computer interaction, I was curious how cogsci methods might contribute to better interface design.
64.	To compare cog architectures.
65.	I am interested in HCI nad cognitive studies
66.	Catch up on current status & maintain awareness of field
67.	Because I'm considering applying this approach to my future projects about risk modelling
68.	To get an idea of available tools for interface design esp. state-of-the-art tools
69.	My research combines CSCW, distributed team work, advanced learning technologies, and organizational communication and behavior. A particular interest is in modeling distributed cognition to better understand interaction in distributed groups. I am presently engaged in research and development of technologies to support distributed real-time adaptive multi-agent systems.
70.	I do & supervise software development in a niche market and have a Ph.D. in cognitive science, so I do pay attention to usability but mostly at the level of functionality (plus some general principles for the UI). We can't easily conduct usability studies, so I was interested in what the modeling options are, especially those that are low-cost, because we're a small company and because my time as a programmer is actually quite valuable.
71.	I would like to acquire a new research skill.
72.	Some aspects of human performance are pertinent to my studies.
73.	I want to expand on my HCI knowledge in general. I'm looking for techniques in UI design and evaluation.
74.	I am a computer scientist with a job in usability
75.	My degree is in Cognitive Science / HCI, and it's a continuing interest in my work as an application developer.
76.	I am an undergraduate student in Computer Graphics who is participating in a Flight Display Technology Human Factors Group at Purdue University. I have been tasked with doing literature reviews and research on cognitive mental modeling and related areas to better understand what a pilots cognitive process in the cockpit is and how to possibly improve cockpit display technology to improve safety, training methods and factors to consider in future design technology. Also, as aviation transitions more into cockpit displays, what are the issues, and what can we do about that?
77.	Sounds quite interesting and applicable to my work as a user experience architect.
78.	I am a grad student researching modeling of visual search for application to HCI.
79.	get survey/high-level view of CM tools and application for UI design
80.	Brush up on modeling knowledge. See how it can be applied – rather than just hearing about research into designing architecture (e.g., tuning parameters)
81.	To find out the latest thinking about modeling and user interface design.
82.	it seemed like it would be interesting---maybe could apply to current work.
83.	It is related to my graduate work in modeling human computer interaction.
84.	Cognitive modeling aspects
85.	I'm from China mainland. There are no such similar courses here in China. CHI is very important in the development of Chinese Information Technology, and will be more important. Cognitive model is the very base of interface design, so I am very interested in it. By the way, I'm working in a HCI Lab in the Chinese

	base of interface design. so, I am very interested in it. By the way, I'm working in a HCI Lab in the Chinese Academy of Sciences. I learned a lot from it. Thanks a lot.
86.	Interested in modeling tools, their use, how best to start the modeling process, reliability, usability. Also want to know what others in the field are doing
87.	I'm looking for more rigorous interface evaluation tools. Also, I'm embarking upon a more general investigation of applied cognitive psychology in hopes of finding a graduate program or question that addresses my interests. I'm not interested in designing specialized jet or bullet train cockpits. Instead, I am most interested in "public" interfaces and how best to test and streamline their functionality. Sending simulated travelers through a proposed transit system or network would be very helpful in identifying problems system-wide.
88.	Doing UI research and software development.
89.	Involved in HCI and Cognitive Engineering at work.
90.	I'm an interdisciplinary student in Computer Sciences and Social Sciences. I'm about to enroll the Human Technology Interaction Msc study at the Eindhoven Technical University. My main interest is User Interface Design. This seminar seemed (and was) a good introduction into a relatively new field of research.
91.	Because I've heard peripherally about all of these models but never knew where to start in terms of trying some of them or knowing the benefits/disadvantages of each.
92.	I have a Ph. D. in Mathematics and I am working on a Ph. D. in Educational Psychology and a Master in Computer and Information Systems. I found this seminar to be very useful.
93.	I work in the human factors field. Sounded like an interesting topic.
94.	I'm interested in learning new methods for UI testing and design.
95.	As a refresher as well as to preview it for some usability specialists who I am mentoring.
96.	I don't know enough about this topic. I am developing graduate HCI courses for a degree and consider a course in this area a possibility.
97.	I wanted to get an up-to-date sense of the state-of-the-art of cognitive modeling as it applies to interface design and evaluation.
98.	I want a review of GOMS and other modeling methods

Question 3

3. How well did the seminar meet your expectations?

	Under expectations		Met expectations		Exceeded expectations	Response Average
1-5	4% (4)	13% (13)	33% (34)	33% (34)	17% (17)	3.46
					Total Respondents	102
					(skipped this question)	0

Question 4

Please explain your answer to question 3:

1.	The content was good and the seminar lay-out was effective.

3.	Very impressed with the content of the seminar and how easily and quickly problems were troubleshooted. I had initial problems getting the audio stream the 2nd day, but that problem was easily fixed after directing my concern to the bulletin board for discussion.
4.	I'm happy with the issues that I'd learned
5.	well that was an "average" of several factors. I was pleased with the format of the seminar and happy to be able to attend without traveling and still be able to "chat" with other attendees. The content was good and met my expectations (but I probably had fairly high expectations). The delivery could have been a bit livelier in spots, but I wouldn't have wanted to trade content for "entertainment" so for me the somewhat dry academic style was OK. There were some technical glitches, but this is probably inevitable as we try out these technologies and learn how to improve things. I think it was a great step in the right direction and I'm glad I attended.
6.	Relatively easy interactions with the presenters. Presentations, with the slides, were simple to follow.
7.	no opinion
8.	The topic was interesting. However, the verbal presentation did not add much to what was written in slides
9.	Thought it would be more of a tutorial on interface design rather than building models to represent your users
10.	I was frustrated with a small mistake that took me away from the seminar for about one hour...a little tag on the seminar URL did that.
11.	I am overseas so I only got to see the material which really need some discussion. I could not get the audio to work at all. Also the time this was going on was not a good time for me
12.	It was very well done overall. Thank you for providing this service.
13.	Excellent, interesting and informative
14.	Actually i m looking for a seminar related to my topic: D explicit cues to Mutual knowledge enhance communication on virtual whiteboard?
15.	I never took part in an online seminar before, so I didn't really have any expectations. But, the seminar was very informative and well-run.
16.	I couldn't attend, too many hoops Lisa was helpful- but the platform was too complex.
17.	Presentations from the first two days were good, I didn't attend the third day. The format was more like summarizing the concepts, it would be more interesting to hear about new things that we haven't heard before.
18.	I only heard the third session because I did not know about it earlier.
19.	Many online seminars are thinly disguised marketing ploys. But this one had a lot of substance and made valuable information available.
20.	There was no video. Really all it was looking at a powerpoint while the facilitator read the slides. This made it rather un-engaging. I was under the impression that there was going to be video and audio. Not really sure what was added by doing chat online when questions could be asked over the phone. It essentially was a phone conference.
21.	I've expected some modeling material – and I've got it.
22.	I was extremely pleased with the level of detail for both the research reviews and for the description of the available tools. Both presenters did a fantastic job!!!
23.	I know the field relatively well. David is tops and I was delighted by Bonnie's portion of the seminar.
24.	I could not attend all of the sessions, however I found it very well organized. Lisa Neal was quick to respond to e-mails, and I appreciate the archives...effort to make the information accessible to as many people as possible.
25.	Dr. Kieras and Johns were clear and concise in delivering the seminar AND answering questions. They were also very open when they had no good answer for a question.

26.	Will need to check for more detail about other work related to inexpensive cog modeling for design.
27.	Info on Cognitive processes was very good
28.	I was hoping to tie this info more into what the Navy is doing to institute Human performance into it schema.
29.	It was difficult to follow for me online due to time constraints and technical problems.
30.	It was both broader and more in-depth than I thought it would be. The leaders were very good about making sure that participant's questions were answered.
31.	I'm a neophyte in this subject. The seminar defined cognitive modeling, described how it can be used to evaluate interfaces, provided practical examples of its application, and then discussed current limitations. I would say that it exceeded expectations, but my expectations were high going into it.
32.	It would have been great to see more of Bonnie John's work and less of David's intro.
33.	didn't think that a web-based presentation could be that effective
34.	Because I am not directly involved in user interface design etc I only expected parts of the seminars e.g. on practical issues, ACT-R and other architectures to be of direct use.
35.	I was looking for a useful overview and was satisfied with the product.
36.	For me, it completely missed the mark. The 'model human processor' implemented as a set of production rules may be descriptive, but it's too complex and time consuming to be useful for everyday design.
37.	I didn't realize this seminar would dive in to cognitive modeling simulation, I thought it would be more about cognitive modeling techniques, although I clearly recall the disclaimer about no hands on cognitive modeling
38.	copies of material will provide valuable future reference. Hearing the seminar provided clarification of the material.
39.	It gave me an excellent overview of what cognitive modeling is all about. I liked the idea of software being made available. I would like to see some specific examples, in software, for us to play with.
40.	Since I had just read a few of Dr. Kieras' publications about GOMS and Cognitive modeling, I wasn't sure I would get much new information out of the seminar, but I found it worthwhile. I especially enjoyed the chat session. It's too bad the technology chose to mediate that session didn't permit everyone in the seminar to be logged into it at the same time.
41.	the last day really was the most useful by describing how cogtool speeds development.
42.	I was unable to participate as much as I wanted too but the content is well prepared.
43.	Too general, the examples were not very instructive
44.	I found the presentation was very professional and informative.
45.	It was superb!
46.	It was what I expected. An overview of the different modeling methods and applications examples. The format made it hard for me to follow the lectures (I constantly got lost between the slides and lecture), even though the presenters did GREAT in trying to minimize this by their reference to slide numbers, etc. Also I would have liked to hear even a brief discussion on industry applications rather than only the 'researchy' type discussions (note that I was not able to listen to session #3, due to schedule constraints).
47.	My initial expectations were to see a complete modeling of a problem solving process. But I soon found I was interested in the research methodology, and the 3rd day presented real insights into how it can be applied in classroom situations.
48.	I wish I could have sat in more of it but I heard David Kieras speak and he was fantastic. He is very much in touch with the current research and I found his presentations helpful.
49.	interpret "cognitive modeling" as being more closely related to human performance than artificial intelligence and computer programming

50.	I was not able to attend all the sessions due to the fact that some of my classes were scheduled at the same time. I felt that the audio files were a big help.
51.	The introduction to the cog. architectures was fine but I didn't like the practical part, it seemed to be very narrowed. Additionally the technical realization wasn't that good.
52.	I did not know what to expect.
53.	My goals were met.
54.	Because my knowledge about user interface design isn't enough and I was afraid about understand the seminar, but the lessons were so clear that I follow them easily
55.	I found the chosen topics to be very useful and informative.
56.	I have set up, managed, and taught several online courses for students at both the undergraduate and graduate levels. As a result, I am familiar with a variety of ways to design courses, present material, and encourage interaction to create an effective virtual environment for work and learning. This seminar was well-designed, provided flexible tools for reception and interaction, and was well-presented. The few technical glitches that occurred were quite insignificant. The facilitators and presenters did a great job of pacing the seminar and presenting the material clearly. The Q & A sessions handled queries from multiple sources very well. Lisa Neal did a great job of keeping attendees informed and managing any unexpected technical glitches.
57.	I thought this might be a very academic conference with a lot of focus on research, and if so, I planned to leave after the first day or as soon as it got too abstract to apply. Actually it got more and more useful as the conference went on. I plan to look at some of the tools mentioned for some of our simpler interfaces, like our web product. It might also be a way of teaching other programmers a bit more about usability. The seminar was also helpful for me in focusing my thoughts on what aspects of usability give us the most bang for the buck.
58.	The seminar was pretty good.
59.	The seminar met expectations, the technical difficulties got in the way.
60.	It was very easy to attend. I liked having the chat as a separate channel to the voice presentation. It made an excellent Q&A forum, and you don't get that kind of timely attention from a stand up presentation. As far as the material covered, I found it helpful.
61.	It was mostly focused on performance, as though users are robots. Usability should be user-oriented until a time when we can accurately depict a real person with a simulation. Other than that, it was good ^__^
62.	The access was amazingly simple and pervasive (text chat, phone, audio)... and it all *worked!* The topic was well-presented by both presenters (Kieras and John), and the moderation was flawless (Lisa Neal). Slide show collateral required some outside assistance with a mirror site, but that worked well, too.
63.	I didn't know what to expect, brand new to this area. I learned a lot just about the different terms and have a better understanding of some of the things involved in this area. Kind of an intro for me as I hope to spend the next few years learning more in these areas. Also, got good references and great notes to review.
64.	Overall, it was much more technical at its core than I expected. Bonnie's presentation brought the practical application to light though...I was getting lost almost w/ the level of technical knowledge needed to utilize cognitive modeling, then Bonnie cleared it up for me w/ showing the practical version of her Cog Tool. I'm a UI designer, who also is responsible for usability engineering, information architecture and design, and over all user experience planning. I see the benefits in doing some of this, but until I saw Cob Tool, was thinking..how would I go about this?
65.	A wide variety of topics in modeling with particular emphasis on issues in usability testing. There was more material on practical issues with modeling than I had expected.
66.	In addition to survey view, gained some useful insights into design/CTA interface and sequencing, and specifics on some recent developments (Johns Cogtool) of tremendous interest. The further reading list was also very valuable. Course provided a tremendous amount of insights and information for a modest amount of participants' time.
67.	Great ideas, research, and results!

68.	I listened to most of the seminar on streaming audio, but didn't follow along too closely with the slides. I think the seminar was a success
69.	I really like the organization of the material, and the delivery of information, it is a successful online seminar.
70.	I want to know what's going on with the Cognitive model. I learned.
71.	This was one of my first telecon seminars, so I wasn't sure what to expect. There were some bugs that needed ironing, and the snow on Monday kept us out, but generally I felt that it was good. The Q&A was really a positive, and the chance to have questions asked answered in the chat was really a good thing. Having two instructors, plus Lisa, meant that while one was talking, somebody else was available to monitor chat and answer questions as we went.
72.	The 28 Feb session was a bit more technical than I had hoped and I wondered if I had made a mistake in signing up. But the 1 March session offered more pragmatic examples which made it easier for me to understand what Dr. Kieras was describing. I am now looking forward to Dr. John's presentation on 2 March.
73.	I wasn't able to attend the second seminar but the first seminar mostly had Kieras reading aloud from his PowerPoint slides. So I logged off and read the slides on my own.
74.	Average. Presentations were informative but rather dry. I could've read the PowerPoint slides and been ok.
75.	The seminar was comprehensive, interactive, educative and fun. I was pleased to be able to ask questions. Although I hoped that the models would be more capable, I found out that there's a wide open field of possible future research. I'll surely take some time for a hands-on experience with CogTool in the near future!
76.	This was exactly what I was looking for in terms of getting an introduction to this topic.
77.	I expected more explanation and elaboration than a basic reading of the slides. The Q&A part was helpful, however
78.	I really like the content, however, I'm a bit disappointed in the lack of depth of concepts. Also, it wasn't clear to me what Epic stood for.
79.	I think that this online course is excellent. The only problem is that I had difficulty following the last example and would have liked the instructor to have gone over it more slowly.
80.	The presentation technology worked very well. The content material was excellent and well presented. The question and answers were invaluable in getting a sense of what the speakers perspective of the state-of-the-art of cognitive modeling -- what it is good for and what it's limitations are.
81.	I liked the screenshots of EPIC. The preface said there would be no "how-to" and I was disappointed. Kieras' review of the EPIC screenshots left my technical side satisfied.

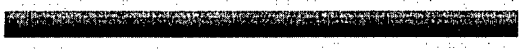
Question 5

5. Instructions for registering and attending the seminar

	Easy		Moderate		Difficult	Response Average
Seminar registration was	**77% (75)**	10% (10)	9% (9)	3% (3)	1% (1)	**1.42**
Attending the seminar was	**57% (54)**	22% (21)	12% (11)	6% (6)	3% (3)	**1.77**
					Total Respondents	**101**
					(skipped this question)	**1**

Question 6

6. How did you experience the seminar? (check all that apply)

		Response Percent
Phone		44.6%
Streaming audio (sound over the computer)		**52.5%**
Archive (recorded playback of the seminar)		32.7%
View If you used more than one option, please say why:		32.7%
	Total Respondents	
	(skipped this question)	

How did you experience the seminar? (check all that apply)

1.	Because my connection wasn't optimum and I've no time to connect all the time
2.	I had some problems with the audio, so went to the phone for part of it. I also wanted to replay some from the archive.
3.	Conflicts with work commitments.
4.	listened to one seminar live, other two seminars through archive
5.	Time restraints. 2.5 hours for three days takes up a good chunk of the week. Especially right after lunch when I am at my most productive state
6.	Had time constraints for the second day to attend live.
7.	I couldn't attend the full seminar as I had to teach classes.
8.	Phone was easiest, but I couldn't attend every day
9.	Actually, I just read the slides
10.	I have downloaded the archived audio so that I can listen to it again later. I'm not sure that I will, but it could be an excellent resource.
11.	I had to use the phone for a bit due to a problem with the streaming audio link; in addition I had to take my office mate's schedule into account.
12.	I missed the first day, so I used the archives to prepare for the second day. I also used the streaming audio to listen, then called into the voice line to ask questions. This left my phone line available.
13.	sometimes I could not get streaming audio and reverted to phone.
14.	Just wanted to see how well it worked. Preferred the phone.
15.	Well some difficulties with the streaming audio meant that I had to listen to the recorded playback
16.	I missed the 2nd seminar because I have to teach and have to access via stream audio because I have no phone access for the 3rd seminar.
17.	Prior commitments meant I was unable to stream the audio at the time. the archive was a great idea- as it meant I could access all three sessions the next day. Thank you!
18.	I saw the slides before the seminar and decided not to attend.
19.	Mostly streaming audio. However, there was a time when there were some problems with the stream that I had to switch over to phone. I much preferred streaming format

	had to switch over to phone. I much preferred streaming format.
20.	I downloaded the slides from the web site and listened on the telephone.
21.	streaming audio did not work on day 3
22.	The material presented by Drs. John and Kieras was complex and voluminous. It is great to have the audio archive to replay particularly interesting and/or challenging segments of presentations.
23.	I downloaded the archive (but haven't reviewed it) because I was called away during part of the first day and I want to go back and see what I missed.
24.	Some portions of the audio were hindered, hampered by technical difficulties; the archives made it possible to catch-up those parts missed.
25.	Text chat. Very useful having text chat running at the same time, especially in a distance seminar where asking the speaker questions during the talk is impossible. Audio archive was important to disseminate the talk to other in my company who were unable to attend in person.
26.	On Wednesday, tried to get on streaming- broken link. Was able to go back to streaming after break.
27.	I started w/ the phone, but realized that the streaming audio was going to be much better for me. I sit in an open space and don't have a head set, so using my headphones I can listen directly to the computer.
28.	I used streaming audio the first two days. The third day I used phone due to troubles with streaming audio the first two days.
29.	attempted to use streaming audio without success
30.	chat was useful for asynchronous comments
31.	Cannot meet the seminar time as it coincide with work
32.	We had a group that totaled about 10 who were interested or attended part of the seminar; those who missed part were interested in reviewing the archive (or at least the Q&A part, since some of the slide presentation could be read just as easily. ;) We didn't even try streaming audio, but I know folks here listen to radio stations, etc, so I'm sure it would have worked.
33.	Due to some other obligations, I wasn't able to attend the first 15 minutes of every meeting.

Question 7

7. Was streaming audio an option for you?

		Response Percent	Response Total
Yes		71.7%	71
No		10.1%	10
Don't know		18.2%	18
	Total Respondents		99
	(skipped this question)		3

Question 8

8. Rate the overall quality of the audio						
	Poor		Acceptable		Excellent	Response Average
Audio quality	0% (0)	3% (3)	31% (29)	31% (29)	34% (32)	3.97
					Total Respondents	93
					(skipped this question)	9

Question 9

Describe any issues you had with sound quality and the duration of the problem	
1.	The sound lost for few seconds or minutes, but after that time, the quality was fine.
2.	the audio was fine except when there were problems like it stopping toward the end of the first session.
3.	It will not run
4.	It was great when I could hear the audio. There were several times when I lost audio, but it could be problems on my end.
5.	One of the speakers seemed to be far away from the microphone (on Monday)
6.	I only used the telephone, and I was very satisfied with that audio. I though the moderators did a really good job.
7.	Streaming audio generally has a warbly quality. This was no exception.
8.	no problems
9.	Quality on streaming audio was better than phone quality for Barbara Tversky's lecture.
10.	operator interruption 5sec. but a critical introduction time.
11.	every once in a while the feed would drop out - may have been on my end?
12.	I could not access to the stream audio at the beginning of the 3rd seminar because the link sent out was broken.
13.	No problems at all.
14.	On the first day, the stream seemed to stop and I had to switch over to the phone. I later switched back. I do not know the reason for the problem. I was glad that I had the phone as a backup.
15.	over the phone the audio seemed fine. Sometimes a background speaker or a call-in question was too quiet.
16.	I choose the phone because the sound quality was superior.
17.	No problems with audio
18.	some time it broke up and there was silence (on day 1)
19.	I was not able to use steaming audio.
20.	None
21.	Loss of sound during brief moments.
22.	Voices did not have a great sense of immediacy. In day one or two there was some sustained coughing on the line (hope everyone is OK)

23.	The only problem on the first day was toward the end of the seminar. The last 10 minutes or so, the sound cut in and out and the presentation was hard to follow.
24.	I hadn't any problem, but my system is very old
25.	There were some occasions when the audio was dropped intermittently for periods of 30 seconds to a couple of minutes during sessions 1 and 2. I hope the missing portions are present in the archive. Otherwise, the audio was of excellent quality.
26.	There was cutting in and out of the sound.
27.	There were some periods of missing audio, but usually for only a few minutes at a time, and only during the space of a half-hour on the second presentation day. Otherwise, the audio quality was very good -- no obvious "digitizing" effects.
28.	For most part, audio when it came in was fine; breakage of audio occurred several times. I was never completely disconnected, just couldn't get on Wednesday at 1pm. Glad to have access to archives for missed material and I was impressed with the communication and prompt handling of the issues.
29.	Tuesday session had some hiccups...there was one (1) instance of the audio skipping, that is repeating a phrase a few times.
30.	When the audio was present, which was most of the time, the quality was good. Audio dropping during the first day and not reconnecting after the break on the second day was problematic.
31.	answer to 8 refers to phone, was not able to use streaming audio due to lack of sw support (stock Mac OS X/Safari)
32.	Couldn't get streaming audio to work on the Macintosh. Vivavid said that the conference wasn't set up for Macs.
33.	the sound quality was an issue to the degree that the voices were not crisp. there was a background of low level white noise---probably due to the medium
34.	We were only on the phone. It worked well there, occasionally one person would be louder or quieter than others, but it was fixed by moving closer.
35.	Sound quality itself was fine, I could hear words clearly. I experienced several long (20-30 seconds) moments of the stream dropping completely. Using MS Media Player and it's been pretty reliable in the past.
36.	Some spots in the audio for several secs now and then, but no big problems.
37.	At the beginning of day 1, I had trouble hearing Bonnie John but that went away by the middle of the session.
38.	There were some lapses of sound -- some up to ~ 15 seconds.
39.	Unfortunately, the audio cut out at some important parts of the example, making it difficult to follow. It is extremely important for the instructor to let the audience know what page they are on.
40.	Sound was not always very clear and sometimes faded in and out -- but overall I could hear and understand the speaker just fine.
41.	The last 30 minutes was choppy.

Question 10

10. How did you ask questions? (check all that apply)			
		Respon	Respon

Phone		10.1%	9
If you did not ask questions, why not?		59.6%	53
	Total Respondents		89
	(skipped this question)		13

How did you ask questions? (check all that apply)

1. I did not have any.

23.	I missed 2 seminar and had to listen t the archive.
24.	Accessing the archives at a later date did not enable me to.
25.	Did not attend.
26.	didn't have any questions - wasn't quite the subject matter I thought.
27.	Did not have the urge. The conference technology was not the barrier.
28.	Many good questions were already asked in the sessions.
29.	just checking things out. if in the course of applying the info, I'll contact the presenters.
30.	Unprepared
31.	I was only able to listen to portions of the presentation and did not attend the QA sessions.
32.	Didn't have any to ask.
33.	I used the archived version
34.	I was already familiar with the topic. Also the content in the slides answered must of my questions (i.e. where to get resources for using this models in industry).
35.	Waaay out of my research area.
36.	I was more interested in hearing what others thoughts were.
37.	No pressing questions.
38.	Didn't have any that were not asked by someone else.
39.	Because I understand everything (or I think so))
40.	Not enough knowledge base to interact and understand all that was being asked. The questions I do have pertain to approaching this area in regards to others who are working in modeling in Cockpit display/ flight applications. Thought I could send personal email later.
41.	The Yahoo chat did not work for me.
42.	Couldn't access the text chat. Maybe it was a java problem on my end. Yahoo has no real online support documentation for the chat tool.
43.	topics were covered by presentation and other questions
44.	I was working while listening to the seminar, so I was only half-involved with the material.
45.	I was more interested about the overview, and didn't feel the need to ask questions.
46.	Too late since I only can listen to the archive.
47.	I could not participate in the seminar because of the time difference.
48.	Streaming audio.
49.	I couldn't get the drift of the topic -- not even enough to ask questions.
50.	no pude conectarme al chat. La red de la universidad no tenia acctivado el servicio
51.	It seemed like the queue was full
52.	The audience questions were excellent.
53.	Difficult to do on streaming audio

Question 11

11. For each instructor, please provide feedback on his or her presentation:						
	Poor	Fair	Good	Very good	Excellent	Response Average
David Kieras: Rate the content of the presentation	1% (1)	0% (0)	28% (26)	**39% (36)**	32% (29)	**4.00**
David Kieras: Rate the quality of presentation materials (slides, etc.)	0% (0)	9% (8)	30% (27)	**35% (32)**	26% (24)	**3.79**
David Kieras: Rate the organization/flow of the presentation	0% (0)	8% (7)	22% (20)	**42% (38)**	29% (26)	**3.91**
David Kieras: Rate the speaker's on-line presentation skills	4% (4)	12% (11)	**30% (27)**	25% (22)	28% (25)	**3.60**
David Kieras: Rate the level of interactivity	3% (3)	17% (15)	28% (25)	23% (21)	**29% (26)**	**3.58**
Bonnie John: Rate the content of the presentation	0% (0)	1% (1)	19% (15)	**40% (31)**	39% (30)	**4.17**
Bonnie John: Rate the quality of presentation materials (slides, etc.)	0% (0)	5% (4)	17% (13)	**45% (35)**	32% (25)	**4.05**
Bonnie John: Rate the organization/flow of the presentation	0% (0)	1% (1)	19% (15)	**42% (32)**	38% (29)	**4.16**
Bonnie John: Rate the speaker's on-line presentation skills	0% (0)	0% (0)	25% (18)	**43% (31)**	32% (23)	**4.07**
Bonnie John: Rate the level of interactivity	1% (1)	8% (6)	33% (24)	21% (15)	**37% (27)**	**3.84**
					Total Respondents	**94**
					(skipped this question)	**8**

Question 12

12. Would you attend a similar on-line seminar in the future?						
	No, definitely not		Maybe		Yes, definitely	Response Average
Attend again	1% (1)	0% (0)	16% (16)	24% (24)	**60% (61)**	**4.41**
					Total Respondents	**102**
					(skipped this question)	**0**

Question 13

If so, what topics or instructors would interest you most?	
1.	More issues related to cognitive modeling - perhaps even learning the architecture by means of a tutorial.

2.	Evolutionary Computation Learning Machine Artificial Intelligence
3.	I'm really short of time right now and you are threatening to close this tomorrow. Could I email this to you later, Lisa?
4.	More of the same, experts in related design fields.
5.	I would like to discuss: Sense making, LSA.
6.	Cognitive science VR Instructional Design E-learning User interface for web development USABILITY **********
7.	Anything that has to do with applying psychological principles to technology. Maybe an artificial intelligence course?
8.	Video games, the cognitive mechanisms at work when they are played. Neuroergonomics Multimodal(ity) Interfaces Adaptive Automation
9.	I volunteered a seminar topic (subject matter expert) to CTA/Aptima and never got a reply. Pretty unorganized and lame if you ask me.
10.	Anything related to cognitive science, cognitive systems engineering, AI.
11.	Cognitive task analysis Acquisition of expertise Intelligent tutoring systems Scenario-based training
12.	modeling of group-related behaviour and group status issues
13.	Discourse models, Intelligent user interfaces, Human-robot interaction
14.	Knowledge Management and Human Performance
15.	HCI and cognitive modelling
16.	"Magic and interface design" by Bruce Tognazzini :)
17.	any instructional technology topic, particularly those having to do with distance learning
18.	Activity Theory or Distributed Cognition or Ethnographic Methods or Abowd's Ubicomp work
19.	Cognitive modeling, User Centered Design, Human Factors Engineering, Cognitive Science, Visual Perception, Attention.
20.	more on how to do cognitive modeling.
21.	Not sure- my specific interest is in ACT-R so uses of this architecture would be useful.
22.	UI design related, especially enhancing usability
23.	I like the advanced HCI type of topics and hearing about research areas - sorta like going to a conference presentation, but staying home!
24.	Susan Chipman -Knowledge Acquisition -or- how to take Cognitive development and learning into account in your design and cognitive task analysis.
25.	more on handheld interface development issues.
26.	More cognitive science...
27.	I am interested in similar topics on Cognitive Modeling and methodologies.
28.	e-learning, Distance Education issues and related topics.
29.	Anything related to HCI and theory applications, rather than only current research topics. I am all for matching the research to industry applications.
30.	- applications of cognitive modeling in the classroom

31.	Current applied research in cognitive and human performance modeling. I did not have a chance to hear Bonnie John speak so would be interested in hearing her in the future.
32.	Performance Improvement, particularly with teams Team Cognition
33.	I would like to hear Bonnie John's presentation because I missed it.
34.	Anything that elucidates on cognition, perception, emotion and how these aspects interact and affect a person's ability to interact and communicate.
35.	I don't. Maybe, I'll take more time in emotions and Keates looks interesting
36.	There has been a lot of work in the intelligent user interface area but I'm not sure if most people who attend CHI also attend IUI for example. It would be nice to have speakers that are from both groups.
37.	Distributed Cognition, Contextual Design, Information Visualization, Multi-Agent Systems, Web Ontology Languages
38.	Topics relating to software development, testing, usability, etc.
39.	cognitive neuroscience, fMRI, ERP, cognitive task analysis
40.	More on UI design. Contextual design is another area I'm interested in.
41.	New methods of traditional usability
42.	-Use Case modeling -Requirements gathering and management -Cost-justifying usability methods - Alternative problem-solving methods (evolutionary computing, genetic algorithm, complex adaptive systems)
43.	More on cognitive mental modeling. Applications to military and flight simulation, air traffic control, cockpit display, etc...
44.	More related on HCI, usability, interaction design. Practical application of user-centered design methods and theory.
45.	Modeling of visual search: Mike Byrne, Anthony Hornof, Jeremy Wolfe Integrating models of complementary or competing tasks: Dario Salvucci, ???
46.	Bonnie Johns, David Kieras
47.	ecological interface design
48.	More into modeling human computer interaction. Maybe topics related to human in the loop systems.
49.	Cognitive model for Ubiquitous computing Distributed Cognition
50.	It was good to get some general instruction / guidance on tools. That might be helpful. Having a particular customer base present would be nice from my perspective (like the Navy and the tools they use; could look at a particular program perhaps, such as Aegis, Tomahawk, DDX, Subs, etc) Information presentation and/or decision making. Tools, techniques, etc. Training issues, how to make training part of the system as it is used, not an afterthought (or, how to design the system with training in mind) - Dr. James Pharmer, NAVAIR Orlando, is one name that pops to mind.
51.	Topics: Applied cognitive psychology Cross cultural interface design Instructors: Richard Nisbett Jef Raskin Don Norman
52.	Like all HCI topics.
53.	Everything about HCI is okay with me!
54.	Not sure right now.
55.	New trends
56.	Any topic in the broad spectrum of human factors.
57.	This is an excellent way to keep up with the state-of-the-art in Cognitive Psychology/Cognitive Engineering/HCI without the need to travel to conferences. It is low cost in terms of time commitment

	Engineering/HCI without the need to travel to conferences. It is low cost in terms of time commitment.
58.	(End-User) Programming by Demonstration tools and research, i.e. Alan Cipher et al

Question 14

14. This seminar was paid for by the Office of Naval Research. Would you be willing to pay for this type of seminar in the future (check all that apply):

	Yes	No	Depends on topic	Don't know	Respondent Total
I would be willing to pay for the phone call:	17% (16)	37% (35)	**40% (38)**	11% (10)	**95**
I would be willing to pay a fee for the seminar:	6% (6)	28% (27)	**58% (56)**	11% (11)	**96**
My employer would be willing to pay for the phone call:	16% (16)	21% (20)	29% (28)	**37% (36)**	**97**
My employer would be willing to pay for the seminar fee:	9% (9)	20% (19)	**38% (37)**	36% (35)	**97**
				Total Respondents	**101**
				(skipped this question)	**1**

Question 15

15. Indicate your primary business sector:

		Response Percent	Response Total
Government (.gov)	[redacted]	8%	8
Military (.mil)	[redacted]	10%	10
Academia (.edu)	[redacted]	**48%**	**48**
Industry (.com)	[redacted]	28%	28
Other (please specify)	[redacted]	6%	6
	Total Respondents		**100**
	(skipped this question)		**2**

Indicate your primary business sector:

1.	I'm a student

4.	We are an .edu doing R&D for the .gov, primarily .mil; a UARC
5.	government contractor (for military)
6.	small business consulting/R&D

Question 16

16. Affiliation:

		Response Percent	Response Total
View	**What is the name and type of company or organization you work for?**	99%	95
View	What is your job title or job description?	96.9%	93
View	**Please enter the name of the state in the US or the country you are in:**	99%	95
	Total Respondents		96
	(skipped this question)		6

Affiliation:

1.	University of Virginia

18.	Queen Mary
19.	George Mason University
20.	Oregon State University
21.	Microsoft
22.	University of Virginia
23.	Naval Undersea Warfare Center
24.	The Texas A&M University System
25.	Pacific Science & Engineering Group
26.	Accessful Solutions, Inc.
27.	Naval Research Lab
28.	Broadcasting
29.	Drexel University
30.	FORELL Enterprises
31.	ONR
32.	L3 Communications
33.	Alpha Solutions Corp
34.	University of Granada
35.	California State Unviersity, Fresno
36.	Intelligent Decision Systems, Inc.--performance solutions
37.	MIT
38.	SPAWAR SSC
39.	SUNY
40.	School of Management, University of Surrey, UK
41.	NASA
42.	transportation
43.	MKS Inc.
44.	Univ Maryland School of Medicine
45.	Rochester Institute of Technology, Information Technology Dept.
46.	Soar Technology - Software
47.	Cognos
48.	Virginia Tech, university
49.	MIT
50.	Humansystems
51.	Stanford University

52.	Department of Mathematical Sciences UNLV
53.	AT&T
54.	University of Central Florida
55.	IL Institute of Technology
56.	NASA
57.	Learning Systems Institute, Florida State University
58.	CSU Northridge
59.	University
60.	Department of the Navy
61.	University of La Verne
62.	usability Architects, Inc.
63.	Cognitive Ergonomics Group
64.	Oregon State University
65.	Quantum Leap Interactive, Inc. (Intelligent Software R & D)
66.	Connect Imaging, medical software vendor (clinical side -- radiology)
67.	Texas A&M Univ.
68.	UTA SUPA
69.	Soar Technology
70.	Ford Motor Company
71.	TechFlow, Inc., Enterprise Application Integration
72.	Purdue
73.	Allstate Insurance Co.
74.	University of Oregon
75.	Aranda Consulting
76.	Army Research Institute
77.	NASA
78.	Whirlpool Corporation
79.	University of Central Florida
80.	University
81.	Intitute of Software, the Chinese Academy of Sciences
82.	Johns Hopkins University Applied Physics Laboratory; UARC/FFRDC type place
83.	Polite Machines
84.	Oregon State University
85.	Johns Hopkins Applied Physics Laboratory

86.	Eindhoven Technical University
87.	University of Virginia
88.	Department of Mathematical Sciences UNLV
89.	Micro Analysis & Design
90.	universidad del sinu
91.	SBC Communications / Telecom
92.	Hewlett Packard
93.	university
94.	Roth Cognitive Engineering
95.	University of California

Affiliation:	
1.	Masters Student

23.	Reseacher
24.	Sr. Instructional Designer
25.	Research Scientist
26.	President & Sr. Human Factors Eng.
27.	Computer Scientist
28.	Website intern
29.	Systems Engineer
30.	coordinator HSI
31.	HCI Designer
32.	Training Consultant
33.	Research Assistant
34.	Professor of Computer Science
35.	senior instructional designer
36.	Student
37.	Human Factors Engineer, Cognitive Scientist
38.	Assistant Professor
39.	PhD Researcher
40.	tech assistant and project manager
41.	senior developer
42.	Senior Developer
43.	Research Analyst
44.	Professor
45.	Human Computer Interface Engineer
46.	Manager, User Interface Design
47.	Industrial Hygienist
48.	Professor
49.	Human Factors Consultant
50.	Graduate student
51.	Assistant Professor
52.	User Experience Engineer
53.	Research Associate
54.	Asst. Professor
55.	Space Human Factors Engineering Program Coordinator
56.	Assistant in Research

57.	Assistant Professor
58.	TA
59.	Industrial Engineer
60.	Assistant Professor
61.	Consultant
62.	Ph. D. Student
63.	Science Applications Coordinator
64.	Director of Development
65.	Assistant Prof.
66.	Doctoral Candidate
67.	Software Engineer
68.	Usability Specialist
69.	Sr. Software Engineer
70.	student
71.	User Experience Analyst
72.	Graduate Student
73.	Principal Consultant
74.	Research Psychologist
75.	Research Psychologist
76.	Senior Usability Specialist
77.	Student
78.	Student
79.	Associate Prof.
80.	Human Factors Scientist
81.	Interface Designer
82.	Software Architect
83.	Computer Engineer
84.	student :D
85.	Professor
86.	Assistant Professor
87.	Human Factors Engineer
88.	investigador
89.	Human Factors R&D
90.	Sr. HFE

91.	professor
92.	Principal Scientist
93.	Graduae Student

Affiliation:	
1.	Virginia

30.	Canada
31.	CA
32.	USA
33.	UK
34.	Virginia
35.	CA
36.	Florida
37.	MA
38.	CA
39.	US
40.	UK
41.	ca
42.	minnesota
43.	Canada
44.	Maryland
45.	NY
46.	Michigan
47.	Canada
48.	Virginia
49.	USA
50.	Ontario, Canada
51.	California
52.	Nevada
53.	New Jersey
54.	Florida
55.	IL
56.	Washington DC
57.	FL
58.	CA
59.	Germany
60.	Virginia
61.	CA
62.	Washington
63.	Spain

64.	Oregon
65.	Hawaii
66.	Hawaii
67.	USA
68.	TX
69.	Michigan
70.	Michigan
71.	NY, USA
72.	Indiana
73.	Illinois
74.	Oregon
75.	Virginia
76.	Virginia
77.	California
78.	MI
79.	FL
80.	VA
81.	China
82.	Maryland
83.	California & New York
84.	OR
85.	Maryland
86.	The Netherlands
87.	Virginia
88.	Nevada
89.	Colorado
90.	colombia
91.	Texas
92.	Colorado
93.	NY
94.	MA, USA
95.	California

Question 17

17. Experience:			
		Response Percent	Response Total
View	How many years, if any, experience do you have in modeling human performance?	96.7%	89
View	How many years, if any, experience do you have in evaluating user interface designs?	96.7%	89
	Total Respondents		92
	(skipped this question)		10

Experience:	
1.	none
2.	0
3.	0
4.	4
5.	None
6.	about 10, off and on among other things
7.	9
8.	0
9.	0
10.	0
11.	2
12.	a couple of months
13.	6 years
14.	1 year
15.	1
16.	0
17.	none
18.	55
19.	10
20.	2
21.	little
22.	0
23.	0
24.	13+

25.	0
26.	zero
27.	0
28.	15
29.	2
30.	2+
31.	1
32.	20
33.	0
34.	1
35.	20+ (experimental psychology)
36.	0
37.	1 year
38.	0
39.	15
40.	5
41.	2
42.	0
43.	4
44.	15
45.	35
46.	4 years
47.	0
48.	2
49.	None
50.	0
51.	5
52.	0
53.	2
54.	1
55.	3
56.	None
57.	Depends on what you mean by "modeling human performance" have never done it to the level that the seminar described

58.	2
59.	0
60.	0
61.	1, as a grad student
62.	6
63.	0
64.	0
65.	1
66.	1
67.	0
68.	0 -as it was outined in this seminar
69.	3
70.	5
71.	10
72.	0
73.	* 2
74.	None
75.	1
76.	*1
77.	0
78.	0
79.	0
80.	none
81.	0
82.	2
83.	1
84.	si, 5 años
85.	0
86.	13
87.	0
88.	almost none
89.	2
Experience:	

1.	none
2.	2
3.	0
4.	5
5.	None
6.	about 10
7.	9
8.	0
9.	5
10.	0
11.	1
12.	2
13.	a couple of months
14.	6 years
15.	4 years
16.	*1
17.	2
18.	none
19.	10
20.	2
21.	20
22.	3
23.	22
24.	13+
25.	0
26.	seven
27.	2
28.	N/A
29.	7
30.	0
31.	1
32.	20
33.	12
34.	10

35.	20+
36.	0
37.	none
38.	0
39.	15
40.	20
41.	2
42.	6
43.	10
44.	20
45.	1
46.	8 years
47.	4
48.	2
49.	20
50.	2
51.	5
52.	0
53.	5
54.	1
55.	5
56.	30
57.	1
58.	0
59.	4
60.	1.5 years of very informal occasional evaluation
61.	0
62.	0
63.	3
64.	2
65.	1
66.	0
67.	10
68.	3

69.	*20
70.	5
71.	4
72.	1
73.	* 2
74.	4 years
75.	1
76.	7+
77.	6
78.	20
79.	0
80.	2
81.	20
82.	2
83.	7
84.	no
85.	5
86.	15
87.	6
88.	20
89.	4

Question 18

If you attended with a group, how many people were in the group? (Please ask all members of the group to fill in this survey)

1.	30

10.	0
11.	2
12.	3
13.	5
14.	1
15.	6
16.	myself on day 1, with one other on days 2 and 3
17.	just me
18.	N/A
19.	none
20.	2
21.	80
22.	2-3 depending on the day and time
23.	2
24.	No
25.	0
26.	0
27.	N/A
28.	4
29.	N/A
30.	0
31.	2
32.	myself
33.	attended alone
34.	1
35.	various, but 6-10
36.	8
37.	1
38.	7

Question 19

If you have additional feedback, please enter it here:	
1.	Wonderful seminar...I look forward to others to come!

	complete it before you close it.
3.	I was a graduate student at U. of Michigan between 1995 and 1997, and I took a course with Professor Kieras. I found his in-person presentation skills to be very good, and I remember I always looked forward to his class. In this "webcast" format, however, he came across as somewhat dry, perhaps because he couldn't gauge the reactions of his audience (and he seemed restrained in his use of humorous anecdotes, etc.). I wonder if it wouldn't help, in general, if these seminars were held in front of a small audience, even though they are being broadcast to the world at the same time.
4.	Registering was difficult because it required belonging to a chat group, which is forbidden by my company's network security. In the future, please offer alternate means of registration when announcing seminars
5.	The slides were a mirror of the presentation. The presentation added nothing for me. I felt like I was listening to an audio book.
6.	Please consider international users and the timing. It's better than archiving. Also have a test the day before to make sure of all software and hardware compatibility. I missed on a seminar because the software they were using did not work through a proxy server.
7.	thought the slides were just phrases from the audio that were very plainly presented. When the audience has the speaker to see and engage with that's acceptable. However, when all the audience sees is the slides, there should be more than just parts of the speech in printed form. ** just a thought!
8.	Reviews and surveys of this sort of material are generally invaluable for practicioners.
9.	Thank you!
10.	When presenting a topic using slide presentation, it is not necessary to read all the information on the slides. I rather expect more elaboration than what I can see in front of me.
11.	This is my evaluation about the online seminar, but I would like to examine the material posted when I can. I think it will be useful to open a comments period ...
12.	Thanks Lisa for arranging this. You might want to look at a shareware program called Babylon. We use it for some distance learning applications since you have a shared whiteboard, presenters can bring up their slides, doodle (in fact, participants can doodle), and do text chat all at the same time. http://visopsys.org/andy/babylon/
13.	I tried to join the chat session but was unable to do so because the maximum number of participants had been met. It would have been nice to have been able to join and/or download a chat record.
14.	Excellent course -
15.	It was a great forum for learning! Wish I was able to attend them all!
16.	I thought that David's example was very difficult to follow. It was hard to read without magnifying it. Switching back and forth to different areas that were not immediately obvious or within the picture, was difficult. Overall, the seminar was terrific. Thanks to the presenters for being so well prepared and knowledgeable.
17.	I thought it worked much better to have one instructor answering questions in the chat while they were still in context than to have all questions held until the next break. I think it's possible a different forum than yahoo would work better, like an ICQ chat room or something - something that supports the copying and pasting of text off the chat history, and logs it, and lets an unlimited number of people connect. I was quite pleased that someone from my alma mater (uwaterloo) was first to offer to mirror the files when they couldn't be downloaded from yahoo. I hope all these technical lessons have been noted for the future. Thanks for organizing it!
18.	Good start of a great form of interaction...
19.	I found it inconvenient using Yahoo groups to register for the conference and to download conference materials.
20.	I was impressed with the speakers' knowledge of content. I hope they continue this service. Having a seminar on line is great, it saves, time and .... to participate. I hope you continue this in the future. Thanks
21.	Overall, great job!, I really appreciate the effort you all put into this seminar. It worked out great and was very informative. Nonetheless in hopes of continued improvements. It would be of great value if future seminars had a live visual component. Even though the audio is just fine, I felt I needed a dynamic mechanism of

	had a live visual component. Even though the audio is just fine, I felt I needed a dynamic mechanisms of letting me know where in the discussions we were (ex. which slide we are in, and what point in the slide we are talking about). Also, when doing demos of software applications it is very hard to understand where in the screen are the items the speaker is talking about, without some kind of 'pointing device". Note also that live demos of software applications done through live online-video are very lousy too (the pointers and screen labels are impossible to see, due to the resolution. I suggest that a combination of the slides an video could enhance the sessions. UCF has the largest long distance learning program in Florida, I am almost certain they would let you use their facilities for live-video streaming. Also, I am had difficulty joining the online-chat due to number of participants limitations.
22.	Thanks for teaching me something new. I will be able to use these methods to think about other issues.
23.	This was a very well run seminar and I felt well prepared. The topic was very informational and the speakers were very knowledgeable. Thank you for the opportunity.
24.	allow more people in chat or open more than one chat forum Special THANK YOU to the Office of Naval Research and to everyone involved in presenting this seminar.
25.	Thanks for the seminar. Thanks for your dedication to solve every problem. Congratulations. It was worthwhile
26.	I appreciated the fact that the seminar fell within normal business hours even in Hawaii Standard Time.
27.	This is my first time taking a seminar like this and my first "formal" time of any teaching on cognitive modeling/ architecture. I am very interested and plan to be studying more on cognitive psychology, human factors, computer programming/graphics, aviation and military simulation and training as a student at Purdue. Thank you for this great opportunity and I would love to be included in any future opportunities along these lines. As I progress in my skills and studies, I hope to be able to meet some of these folks, attend seminars and make applications to our research endeavor. I have some background in aviation education, a private pilot license and was an air traffic controller in military. Now studying computer graphics and interested in training and simulation. If you had any input on what types of seminars and training that would relate to this, could you please contact me? Thank you so much!
28.	Thanks for opening this up to the public, I feel I gained a good deal of knowledge and exposure via this opportunity.
29.	I really like the prompt posting of the audio archives. I also found the posting of questions answered off-line useful. I would like to see an archive of the text chat.
30.	Attempts to ask question via phone failed, not sure why. Glad to see multiple paths provided for questions. Also valued multiple alternatives for downloading materials. The use of a facility like Elluminate would have made attendance easier (vs downloading and tracking multiple files). Overall, was very impressed with the instructors and their blend of theoretical/practical experience and breadth and depth of knowledge of the subject and current research. The course organization was also very professional, not least the moderator's grace and flexibility in dealing with emergent challenges.
31.	It would be great if the slides were in Powerpoint format for printing/following along. It would also be helpful if we could have had the slides presented online, synchronized with the talk
32.	System requirements for the seminar should be stated up front. The streaming audio didn't work on a Mac (Vivavid said they support Macs but the conference wasn't set up for them). I think the chat required Java Virtual Machine software.
33.	overall, excellent experience! I'm very pleased that this was a free seminar---I didn't have to convince my boss to pay for anything!
34.	Nice Seminar, I am glad that I knew about it.
35.	Playing back with Video would be better for me.
36.	Great opportunity, definitely would like to see this on a semi-regular basis. Would prefer slightly more lively presentation than Dave (I could have read his slides with more verve than he read his slides). Definitely liked the interaction opportunities with questions via phone and chat.
37.	Seminar description should indicate that most of the work being presented is still in the research stage. It's clear that a simulated user approach is useful, especially for very complex software applications. I had hoped to learn something adaptable to less complex but more ubiquitous interfaces where error rates may not be

	to learn something adaptable to less complex but more ubiquitous interfaces where error rates may not be life threatening, but chip away at company profits and customer confidence instead.
38.	Summary of all the tools was nice. Maybe include slides with examples of projects that have used each of the tools/cognitive architectures.
39.	I'm very pleased with the ambitions of the organisation that provided the seminar. Making this a world-wide event was very encouraging, stimulating and exciting!
40.	Thanks!
41.	Thank you. I greatly appreciate the effort.
42.	It isn't clear who the intended audience is. Sometimes I think it's a basic HFE class and other times it seems like it is for those operating in the field.
43.	I really liked this format. It is very convenient and the timing worked very well for me. I am really getting a very good idea about this topic. I hope that there is some software available to try it out. I haven't heard Bonnie's segment yet. I thought this survey was for the first day. There is no way to 'undo' Bonnie's ratings. (interesting usability issue!)
44.	the audio should be improved

Question 20

Optional: If you would like to be on a mailing list for further seminars, please enter your name	
1.	Sebastien

20.	stephen Mallett
21.	John Ross
22.	Nacho Madrid
23.	brent auernheimer
24.	Jo MacDonald
25.	joseph divita
26.	Songmei Han
27.	Claire McAndrew
28.	Rudy Aquilina
29.	Mike Schmiderer
30.	Danny Ho
31.	Evelyn Rozanski
32.	Anne KG Murphy
33.	Albert Moore
34.	Kudos
35.	Laurence R. Young
36.	Jeff Bos
37.	Angela Kessell
38.	Dr. Frank Saba
39.	Maria Gabriela Alvarez-Ryan
40.	Roberto Champney
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